

## Targeter System for 3.5mm Medial Distal Tibia Locking Plates



# PERI-LOC<sup>◇</sup> Periarticular Locked Plating System

## Targeter System for 3.5mm Medial Distal Tibia Locking Plates Surgical Technique

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### Nota Bene

The technique description herein is made available to the healthcare professional to illustrate the author's suggested treatment for the uncomplicated procedure. In the final analysis, the preferred treatment is that which addresses the needs of the specific patient.

# Product Overview

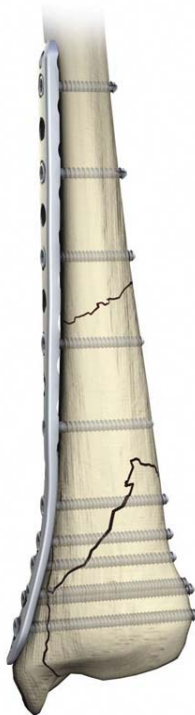
The PERI-LOC® Periarticular Locked Plating System from Smith & Nephew, offers the advantages of locked plating with the flexibility and benefits of traditional plating in one system. Utilizing both locking and non-locking screws, the PERI-LOC System offers a construct that resists angular (e.g. varus/valgus) collapse while simultaneously acting as an effective aid to fracture reduction. A simple and straightforward instrument set features one screwdriver, standardized drill bits, and color-coded instrumentation, thus making the PERI-LOC Periarticular Locked Plating System efficient and easy to use.

The PERI-LOC 3.5mm Medial Distal Tibia Targeter provides a less invasive surgical approach with locking screw options. By aligning directly with the plate's screw hole configuration, the Targeter optimizes the screw placement percutaneously. All PERI-LOC implants are manufactured using the highest quality 316L stainless steel for strength and durability.

The precontour of the 3.5mm Medial Distal Tibia Locking Plate provides an excellent fit against the surface of the bone.

Each screw hole will accept one of four different screws allowing you to customize the screw configuration depending on the individual needs of the fracture:

- 3.5mm Locking Self-Tapping Cortex Screw
- 3.5mm Self-Tapping Cortex Screw (Non-Locking)
- 4.0mm Partially Threaded Cancellous Screw
- 4.0mm Fully Threaded Cancellous Screw



## Indications

The PERI-LOC Periarticular Locked Plating System can be used in adult and pediatric patients as well as patients with osteopenic bone. It is indicated for fixation of pelvic, small and long bone fractures, including those of the tibia, fibula, femur, pelvis, acetabulum, metacarpals, metatarsals, humerus, ulna, calcaneus and clavicle.

Components in the PERI-LOC Periarticular Locked Plating System are for single use only.

# Design Features



AP view illustrates the contouring of the plate and the angulation of the screws.

Beveled tip allows easy percutaneous insertion of plate

1mm of translation can be accomplished through every hole (i.e. compression)

Anatomically contoured to match the distal tibia



Most proximal holes accept Articulating Tension Device for compression or distraction. Cat. No. 7117-0145

Distal tab with screw hole contours to medial malleolus

Each of the holes can accept one of four different screws:



3.5mm Self-Tapping Cortex Screw (Non-Locking)



3.5mm Locking Self-Tapping Cortex Screw



4.0mm Fully Threaded Cancellous Screw

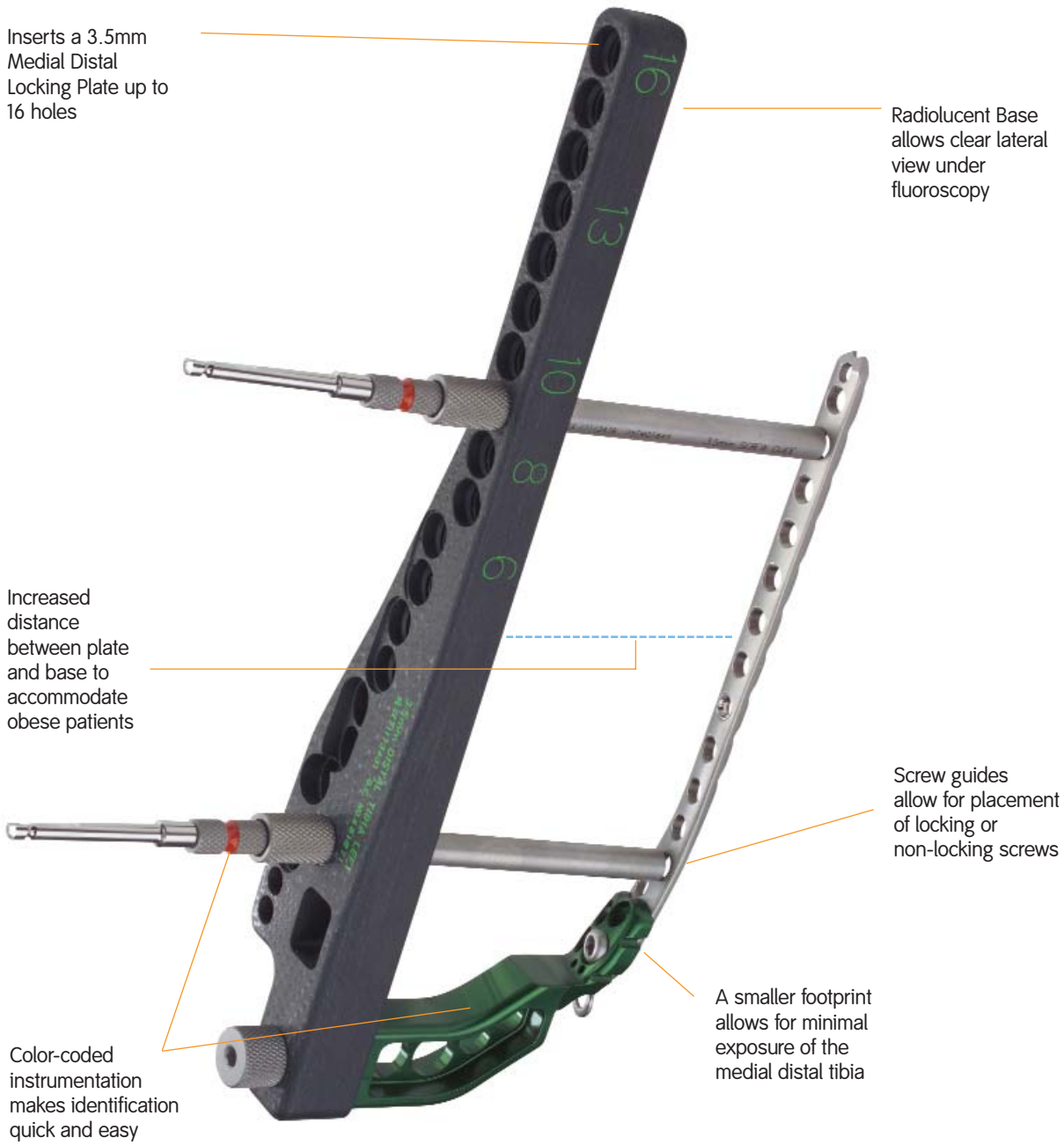


4.0mm Partially Threaded Cancellous Screws

All screws use 3.5mm Hexdriver.

# Design Features

## 3.5mm Medial Distal Targeter



# Targeter System for 3.5mm Medial Distal Tibia Locking Plate - Surgical Technique

## Patient Positioning

Place the patient in a supine position on a radiolucent table. Confirm that an unhindered AP and lateral view of the distal tibia can be obtained with fluoroscopy.

Obtain gross metaphyseal alignment using manual traction or skeletal distraction.

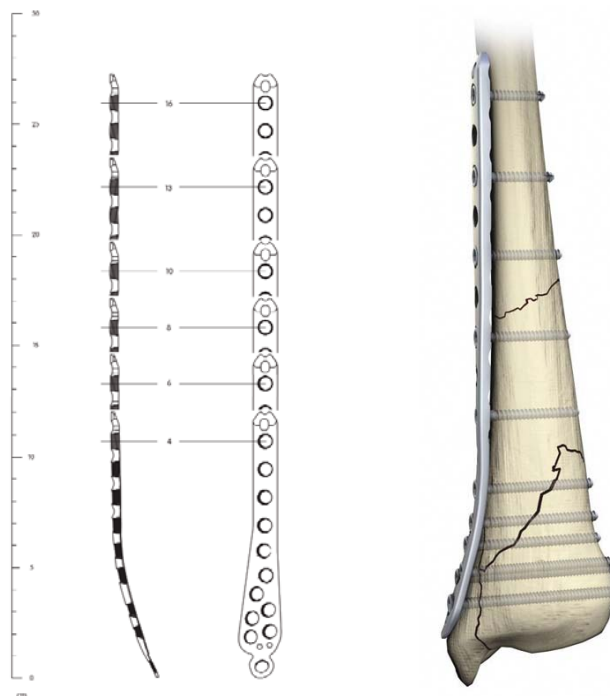
## Incision

For a minimally invasive procedure, a short incision at the medial malleolus is recommended. Short stab incisions can be made to access screw holes in the plate shaft.



## Plate Selection

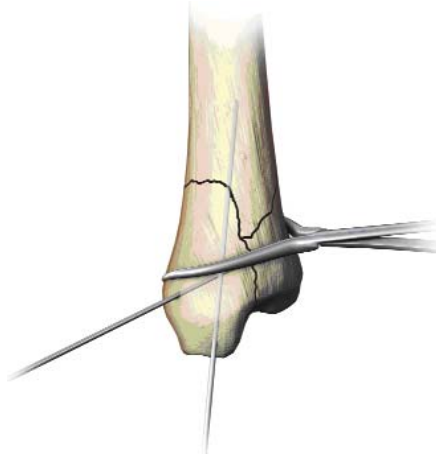
Using the PERI-LOC® Medial Distal Tibia Locking Plate Preoperative Template, determine the appropriate length plate for the fracture. In general, a longer plate allows for better mechanical advantage over a shorter plate. An allowance for five screw holes above the most proximal aspect of the fracture is recommended when selecting plate length.



PERI-LOC 3.5mm Medial Distal Tibia Locking Plate Preoperative Template  
Cat. No. 7118-0918

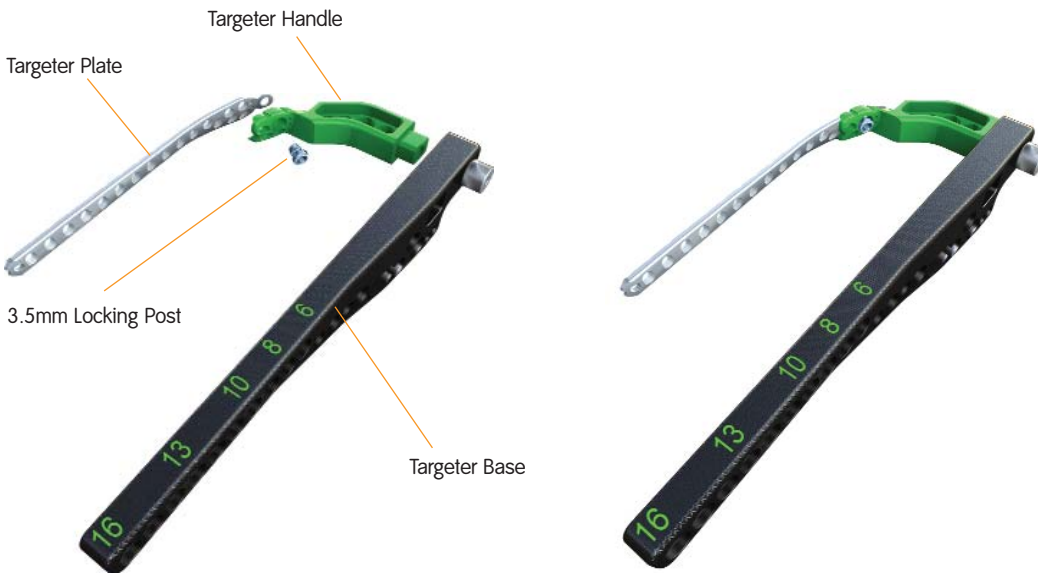
# Articular Reduction and Provisional Fixation






It is important that articular fracture reduction be obtained prior to placement of locking screws. Temporarily secure articular fragments by using K-Wires and/or Reduction Forceps. Place provisional and/or definitive fixation outside the plate if necessary.



# Plate and Targeter Assembly

Assemble the Targeter Base, Handle and Plate on the back table as shown.



				
3.5mm Medial Distal Tibia Locking Plate Cat. No. 7182-XXXX	Targeter 2.7mm Drill Guide Cat. No. 7117-3420	1.6 x 260mm K-Wire Cat. No. 7117-3300	3.5mm Medial Distal Tibia Handle Cat. No. 7117-3429 (Left) Cat. No. 7117-3430 (Right)	3.5mm Medial Distal Tibia Base Cat. No. 7117-3431 (Left) Cat. No. 7117-3432 (Right)

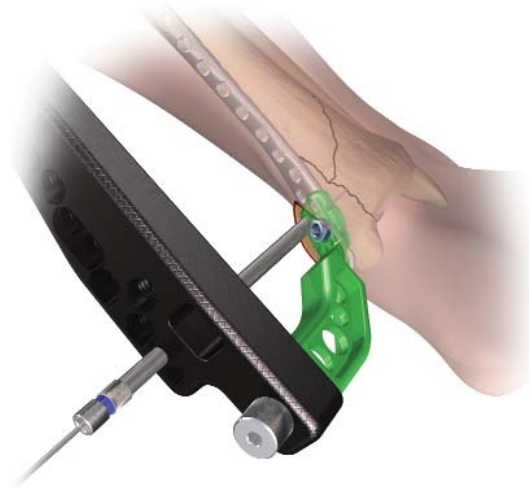
## Plate Insertion

Insert the plate between the muscle and periosteum keeping the proximal end of the plate against the tibia during insertion.



## Plate Positioning

Position the PERI-LOC<sup>®</sup> 3.5mm Medial Distal Tibia Locking Plate by matching the contour of the plate to the distal portion of the medial tibia. Insert K-wire guide in either of the proximal holes to thumb screw and insert K-wire. Check the alignment of plate to distal tibia and confirm with radiograph.



Targeter 1.6mm  
K-Wire Guide  
Cat. No. 7117-3421

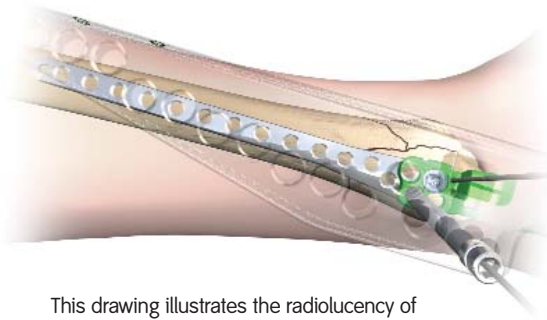


3.5mm Medial Distal  
Tibia Locking Plate  
Cat. No. 718x-1xxx



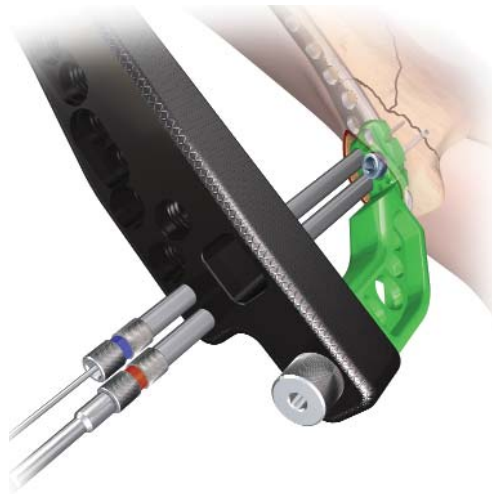
## Sagittal Alignment

Obtain sagittal alignment of fracture and confirm with a lateral radiograph.



This drawing illustrates the radiolucency of the PERI-LOC® Targeter.

Upon confirming alignment insert the orange color coded 2.7mm Drill Guide into adjacent hole in base and insert 2.7mm Metaphyseal Provisional Fixation Pin (40mm).



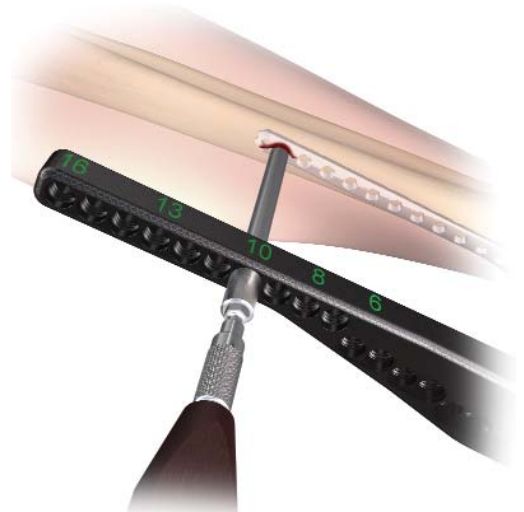
2.7mm Drill Guide  
Cat. No. 7117-3420



2.7mm PF Pin 40mm  
Metaphyseal  
Cat. No. 7117-3406

## Access to Proximal Holes

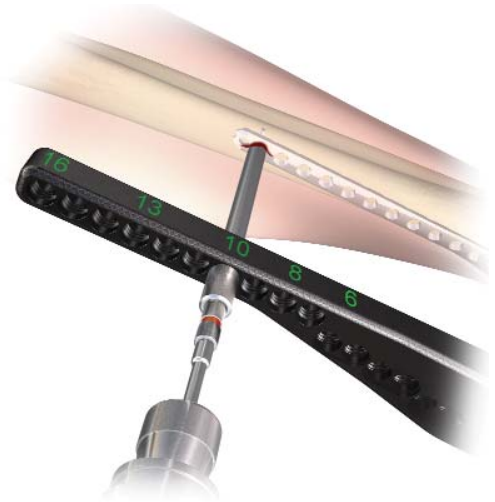
Remove the trocar and insert an orange drill guide, threading it into the plate. To access the proximal hole, insert the screw guide with a trocar through a small stab incision until the screw guide reaches the plate and into the base.



## Confirm Coronal Alignment

Confirm a centered sagittal position of the plate with lateral fluoroscopic radiographs, and insert a short (diaphyseal) PF pin in the most distal hole.

If further reduction of the proximal portion of the diaphyseal fragment is required, center the plate on the proximal diaphyseal fragment and provisionally fix the plate close to the fracture by repeating the previous step. Obtain final confirmation of fracture alignment and implant position.



Targeter 3.5mm  
Trocar  
Cat. No. 7117-3422



Targeter 3.5mm  
Screw Guide  
Cat. No. 7117-3419



Targeter 2.7mm  
Provisional Fixation  
Pin, 18mm  
Cat. No. 7117-3438



Large Fragment  
Screwdriver Handle  
Cat. No. 7117-3547

## Definitive Fixation

Proceed with definitive fixation of the shaft and the fragments with appropriate screw selections. If a combination of non-locking screws and locking screws is necessary, then insert the non-locking cortex screws before locking screws are inserted in each fragment.



Targeter 3.5mm  
Self-Retaining  
Hexdriver  
Cat. No. 7117-3486



Targeter 2.7mm  
Drill Bit  
Cat. No. 7117-3418



Targeter 3.5mm  
Trocar  
Cat. No. 7117-3422



Targeter 3.5mm  
Screw Guide  
Cat. No. 7117-3419



Targeter 2.7mm  
Provisional Fixation  
Pin, 18mm  
Cat. No. 7117-3438



Large Fragment  
Screwdriver Handle  
Cat. No. 7117-3547

## Proximal Screw Insertion

The remaining proximal screws can be either 3.5mm Locking Cortex Screws or 3.5mm Self-Tapping Cortex Screws (Non-Locking) or 4.0mm Partially or Fully Threaded Cancellous Screws.

## 3.5mm Locking Screw Insertion Technique

To implant 3.5mm Locking Self-Tapping Cortex Screws, predrill with the 2.7mm Drill Bit with Quick Connect through the inner 2.7mm (orange stripe) Drill Guide insert. Determine screw length using calibrations on Drill Bit. Remove inner 2.7mm Drill Guide insert. Insert appropriate length 3.5mm Locking Self-Tapping Cortex Screw through outer 3.5mm Screw Guide. The screw is completely seated in the plate when the black stripe on the Hexdriver reaches the top of the Drill Guide. Distal PF pin(s) should remain until all other distal screws have been implanted to keep the base-to-plate alignment secure. After all other proximal screws have been inserted, remove the PF pin(s) and replace with 3.5mm locking screw(s) using the steps previously described. Note: Locking screws can be inserted using a powered drill system but should be tightened by hand. Tightening screws with a powered drill system may cause loss of reduction or expose the screw heads to excess torque.



3.5mm Locking  
Self-Tapping Cortex  
Screws  
Cat. No. 7182-5xxx



Targeter 2.7mm Drill  
Bit  
Cat. No. 7117-3402



Targeter 2.7mm Drill  
Guide  
Cat. No. 7117-3382



Targeter 3.5mm  
Screw Guide  
Cat. No. 7117-3397



3.5mm Self-Tapping  
Cortex Screws (Non-  
Locking)  
Cat. No. 7182-4xxx

## 3.5mm Self-Tapping Cortex Screw Insertion Technique

Pre-drill for the 3.5mm Self-Tapping Cortex Screws (Non-Locking) using the 2.7mm (orange) Drill Bit through the inner 2.7mm (orange stripe) Drill Guide. Measure for length using the calibrations on the 2.7mm Drill Bit. Remove the inner 2.7mm Drill Guide, then insert the appropriate length 3.5mm Self-Tapping Cortex Screw (non-locking) through the outer 3.5mm Drill Guide using the 3.5mm Hexdriver. Option: As screws are inserted in the plate, base plugs can be placed in the Targeter base. These base plugs serve as a reminder of previously placed screws. The screw is completely seated in the plate when the black stripe on the Hexdriver reaches the top of the drill guide. The proximal hole with the PF pin should be the last to be filled in the distal fragment. Remove the PF pin and replace with a 3.5mm locking screw as previously described. Once all desired screws are inserted, remove the handle and base from the plate by unscrewing the Locking Post. If desired, insert a 3.5mm locking screw by threading the 2.7mm (orange strip) Drill Guide into that hole, drilling with the 2.7mm Drill and placing appropriate length 3.5mm Locking Screw after removing the 2.7mm Drill Guide. Make sure all screws are tight before closing the wound.



3.5mm Locking Self-Tapping Cortex Screws  
Cat. No. 7182-5xxx



Targeter 2.7mm Drill Bit  
Cat. No. 7117-3402



Targeter 2.7mm Drill Guide  
Cat. No. 7117-3382



Targeter 3.5mm Screw Guide  
Cat. No. 7117-3397



3.5mm Self-Tapping Cortex Screws (Non-Locking)  
Cat. No. 7182-4xxx



Final Lateral View



Final AP View

# Catalog Information – Medial Distal Tibia Plates

## Set Configuration – 3.5mm Medial Distal Tibia Locking Plates

Cat. No.	Length	Quantity in Set
7182-1006	6H Left 146mm	1
7182-1008	8H Left 171mm	1
7182-1010	10H Left 196mm	1
7182-1013	13H Left 235mm	1
7180-1016	16H Left 272mm	0
7182-1106	6H Right 146mm	1
7182-1108	8H Right 171mm	1
7182-1110	10H Right 196mm	1
7182-1113	13H Right 235mm	1
7180-1116	16H Right 272mm	0



## Small Outer Case – 2.4”

Cat. No. 7112-9401



## Lid for Outer Cases

Cat. No. 7112-9402



## Plate Tray

Cat. No. 7117-0324

# Catalog Information – Small Fragment System Screws

## 2.7mm Self-Tapping Cortex Screws (Non-Locking)



Cat. No.	Length	Quantity in Set
7182-3010	10mm	3
7182-3012	12mm	3
7182-3014	14mm	3
7182-3016	16mm	3
7182-3018	18mm	3
7182-3020	20mm	3
7182-3022	22mm	3
7182-3024	24mm	3
7182-3026	26mm	3
7182-3028	28mm	3
7182-3030	30mm	3
7182-3032	32mm	3
7182-3034	34mm	3
7182-3036	36mm	3
7182-3038	38mm	3
7182-3040	40mm	3
7182-3045	45mm	3
7182-3050	50mm	3
7182-3055	55mm	3
7182-3060	60mm	3
7182-3065	65mm	3
7182-3070	70mm	3

## 3.5mm Self-Tapping Cortex Screws (Non-Locking)



Cat. No.	Length	Quantity in Set
7182-4010	10mm	5
7182-4012	12mm	5
7182-4014	14mm	5
7182-4016	16mm	10
7182-4018	18mm	10
7182-4020	20mm	5
7182-4022	22mm	5
7182-4024	24mm	5
7182-4026	26mm	5
7182-4028	28mm	5
7182-4030	30mm	5
7182-4032	32mm	5
7182-4034	34mm	5
7182-4036	36mm	5
7182-4038	38mm	5
7182-4040	40mm	5
7182-4045	45mm	5
7182-4050	50mm	5
7182-4055	55mm	5
7182-4060	60mm	5
7182-4065	65mm	5
7182-4070	70mm	5
7182-4075	75mm	5
7182-4080	80mm	5
7180-4085	85mm	0
7180-4090	90mm	0
7180-4095	95mm	0
7180-4100	100mm	0
7180-4105	105mm	0
7180-4110	110mm	0



### 3.5mm Locking Self-Tapping Cortex Screws



Cat. No.	Length	Quantity in Set
7182-5010	10mm	5
7182-5012	12mm	5
7182-5014	14mm	5
7182-5016	16mm	10
7182-5018	18mm	10
7182-5020	20mm	5
7182-5022	22mm	5
7182-5024	24mm	5
7182-5026	26mm	5
7182-5028	28mm	5
7182-5030	30mm	5
7182-5032	32mm	5
7182-5034	34mm	5
7182-5036	36mm	5
7182-5038	38mm	5
7182-5040	40mm	5
7182-5045	45mm	5
7182-5050	50mm	5
7182-5055	55mm	5
7182-5060	60mm	5
7182-5065	65mm	5
7182-5070	70mm	5
7182-5075	75mm	5
7182-5080	80mm	5
7180-5085	85mm	0
7180-5090	90mm	0
7180-5095	95mm	0
7180-5100	100mm	0
7180-5105	105mm	0
7180-5110	110mm	0

#### 4.0mm Fully Threaded Cancellous Screws



Cat. No.	Length	Quantity in Set
7182-5210	10mm	3
7182-5212	12mm	3
7182-5214	14mm	3
7182-5216	16mm	3
7182-5218	18mm	3
7182-5220	20mm	3
7182-5222	22mm	3
7182-5224	24mm	3
7182-5226	26mm	3
7182-5228	28mm	3
7182-5230	30mm	3
7182-5232	32mm	3
7182-5234	34mm	3
7182-5236	36mm	3
7182-5238	38mm	3
7182-5240	40mm	3
7182-5245	45mm	3
7182-5250	50mm	3
7182-5255	55mm	3
7182-5260	60mm	3
7182-5265	65mm	3
7182-5270	70mm	3
7182-5275	75mm	3
7182-5280	80mm	3
7180-5285	85mm	0
7180-5290	90mm	0
7180-5295	95mm	0
7180-5300	100mm	0

#### 4.0mm Partially Threaded Cancellous Screws



Cat. No.	Length	Quantity in Set
7182-5310	10mm	3
7182-5312	12mm	3
7182-5314	14mm	3
7182-5316	16mm	3
7182-5318	18mm	3
7182-5320	20mm	3
7182-5322	22mm	3
7182-5324	24mm	3
7182-5326	26mm	3
7182-5328	28mm	3
7182-5330	30mm	3
7182-5335	35mm	3
7182-5340	40mm	3
7182-5345	45mm	3
7182-5350	50mm	3
7182-5355	55mm	3
7182-5360	60mm	3
7182-5365	65mm	3
7182-5370	70mm	3
7182-5375	75mm	3
7182-5380	80mm	3
7180-5385	85mm	0
7180-5390	90mm	0
7180-5395	95mm	0
7180-5400	100mm	0

#### Washers

Cat. No.	Diameter	Quantity in Set
7114-3107	7.0mm O.D.	6



# Catalog Information – Targeter System for 3.5mm Medial Distal Tibia Locking Plate Instruments

## Small Outer Case – 2.4”

Cat. No. 7112-9401



## Lid for Outer Cases

Cat. No. 7112-9402



## 4.5mm Lateral Distal Femur Targeter Tray

Cat. No. 7117-0325

## Targeter 2.7mm Drill Guide

Cat. No. 7117-3382



## Targeter 1.6mm K-Wire Guide

Cat. No. 7117-3421



## Targeter 3.5mm Screw Guide

Cat. No. 7117-3397



## Targeter 3.5mm Medial Distal Tibia Handle, Left

Cat. No. 7117-3429



## Targeter 3.5mm Medial Distal Tibia Handle, Right

Cat. No. 7117-3430



## Targeter 3.5mm Trocar

Cat. No. 7117-3422



## Targeter 3.5mm Self-Retaining Hexdriver

Cat. No. 7117-3486



Targeter 3.5mm Medial Distal Tibia Base, Left  
Cat. No. 7117-3431



Targeter 3.5mm Medial Distal Tibia Base, Right  
Cat. No. 7117-3432



Large Fragment Screwdriver Handle  
Cat. No. 7117-3547



## Catalog Information – Targeter System for 3.5mm Medial Distal Tibia Locking Plate Disposables

Targeter K-Wire 1.6mm x 260mm  
Cat. No. 7117-3300



Targeter 2.7mm Drill Bit  
Cat. No. 7117-3402



Targeter 2.7mm Provisional Fixation Pin, 40mm  
Cat. No. 7117-3406



Targeter 2.7mm Provisional Fixation Pin, 18mm  
Cat. No. 7117-3438



Targeter 3.5mm Base Plug  
Cat. No. 7117-3437



# Catalog Information – Small Fragment System Instruments

## Sharp Hook

Cat. No. 7117-0043



## Hohmann Retractor, 8mm Width

Cat. No. 7117-0057



## Hohmann Retractor, 15mm Width

Cat. No. 7117-0095



## Hohmann Retractor Bent, 8mm

Cat. No. 7117-3369



## Wire Bending Pliers, 140mm Length

Cat. No. 7117-0063



## Bending Pliers for 2.7mm & 3.5mm Plates

Cat. No. 7117-0076



## Bending Pliers for 3.5mm Reconstruction Plates

Cat. No. 7117-0175



## Periosteal Elevator 6mm, Rounded

Cat. No. 7117-0097



## Universal Plate Bending Irons

Cat. No. 7117-3367



## Small Fragment Countersink

Cat. No. 7117-3344



## Reduction Forceps with Ratchet-Bowed, 205mm

Cat. No. 7117-3370



## Reduction Forceps with Points, Broad

Cat. No. 7117-3377



Reduction Forceps with Serrated Jaw  
Cat. No. 7117-3378



3.5mm Locking Screw Guide  
Cat. No. 7117-3538



2.7mm Locking Drill Guide Insert  
Cat. No. 7117-3529



2.7mm Locking Drill Guide – One Piece  
Optional  
Cat. No. 7117-3450



Universal Drill Guide Handle  
Cat. No. 7117-3349



2.0mm Wire/Drill Insert  
Cat. No. 7117-3517



2.7mm Drill Guide Insert  
Cat. No. 7117-3510



3.5mm Drill Guide Insert  
Cat. No. 7117-3513



2.7mm Neutral Locking Hole Insert  
Cat. No. 7117-3514



2.7mm Compression Locking Hole Insert  
Cat. No. 7117-3515



2.7mm Neutral Slot Insert  
Cat. No. 7117-3512



2.7mm Compression Slot Insert  
Cat. No. 7117-3511



2.0mm Parallel Wire/Drill Guide  
Cat. No. 7117-3516



Short 3.5mm Screw Depth Gauge  
Cat. No. 7117-3523



2.7mm Screw Depth Gauge  
Cat. No. 7117-3525



3.5mm Screw Depth Gauge  
Cat. No. 7117-3534



### Cannulated Bending Irons for K-Wires

Cat. No. 7117-3527



### Cannulated AO to Trinkle Adaptor

Cat. No. 7117-3528



### Small T-Handle, Quick Coupling

Cat. No. 7117-3542



### Tear Drop Handle Screwdriver with Quick Connect

Cat. No. 7117-3543



### Large Screwdriver Handle

Cat. No. 7117-3547



### Self Centering Reverse Verbrugge, 190mm

Cat. No. 7117-3544



### 2.5mm Hexdriver Shaft with AO Quick Connect

Cat. No. 7117-3535



### 3.5mm Hexdriver Shaft with AO Quick Connect

Cat. No. 7117-3537



### Small Fragment Guide Removal Assembly

Cat. No. 7117-3549



## Catalog Information – Small Fragment System Trays

### Large Outer Case – 4.8”

Cat. No. 7112-9400



### Lid for Outer Cases

Cat. No. 7112-9402



### PERI-LOC<sup>®</sup> Small Fragment Instrument Tray

Cat. No. 7117-0330



# Catalog Information – Small Fragment System Disposables

## K-Wires with Trocar Point and Threaded Pins

Cat. No.	Description	Quantity in Set
7116-1012	1.25mm x 150mm	6
7116-1016	1.6mm x 150mm	6
7116-1020	2.0mm x 150mm	6



## Taps with Quick Connect

Cat. No.	Description	Quantity in Set
7117-3318	3.5mm	2
7117-3366	2.7mm	2
7117-3386	4.0mm Cancellous	2



## Provisional Fixation Pins

Cat. No.	Description	Quantity in Set
7117-3322	2.7mm x 18mm	4
7117-3323	2.7mm x 40mm	4



## Drill Bits with Quick Connect

Cat. No.	Description	Quantity in Set
7117-3501	2.0mm	2
7117-3502	2.7mm Short	2
7117-3503	2.7mm	2
7117-3504	3.5mm Short	2





Notes:

**Orthopaedics**

Smith & Nephew, Inc.  
1450 Brooks Road  
Memphis, TN 38116  
USA

[www.smith-nephew.com](http://www.smith-nephew.com)

Telephone: 1-901-396-2121  
Information: 1-800-821-5700  
Orders/inquiries: 1-800-238-7538